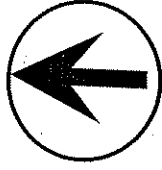


Date : 10/18/07

Count Number : TMC0735

Location : CSAH 51 (University Ave.)

@ 90th Lane



North

15154

#2

7948	83	T
7762		TH
103		D

7206

90th Lane

79	146
7	
60	

G

H

J

#3

300

154

64	K
7011	L
183	M
7258	

8020

#4

15278

CSAH 51

293	C
116	B
7	A
198	
321	

#1

614

Commercial Entrance

	LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	0	0	1	1
#2	0	0	2	2
#3	0	0	1	1
#4	0	0	2	2

Anoka County Highway Department
Traffic Volume and Turning
Movement Study



Anoka County Highway Department

Traffic Engineering Section Traffic Volume and Turning Movement Study

Weather: Rainy and Mild
Counter: DB-400
Counted by: Josie/Terri

File Name : TMC0735
Site Code : 07350201
Start Date : 10/18/200
Page No : 2

Groups Printed- Unshifted

Start Time	CSAH 51 Southbound					90th Lane Westbound					CSAH 51 Northbound					Commercial Entrance Eastbound					Exclu. Total	Inclu. Total	Inf. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
18:00	1	177	3	2	181	1	1	4	0	6	4	202	1	1	207	4	0	3	0	7	3	401	404
18:15	1	77	1	1	79	0	0	1	0	1	4	121	1	0	126	3	0	5	0	8	1	214	215
18:30	1	135	3	1	139	1	0	3	0	4	7	190	3	5	200	6	1	6	1	13	7	356	363
18:45	1	139	1	1	141	0	0	1	0	1	4	123	0	0	127	4	0	6	0	10	1	279	280
Total	4	528	8	5	540	2	1	9	0	12	19	636	5	6	660	17	1	20	1	38	12	1250	1262
19:00	0	100	0	0	100	0	0	1	0	1	4	119	2	3	125	0	0	3	0	3	3	229	232
19:15	2	94	0	1	96	1	0	2	0	3	3	105	0	0	108	1	0	4	0	5	1	212	213
19:30	0	84	1	0	85	1	0	1	0	2	1	124	2	0	127	2	0	2	0	4	0	218	218
19:45	2	63	1	2	66	1	0	0	0	1	1	106	0	2	107	0	0	8	0	8	4	182	186
Total	4	341	2	3	347	3	0	4	0	7	9	454	4	5	467	3	0	17	0	20	8	841	849
20:00	3	56	2	0	61	0	0	1	0	1	3	85	2	0	90	2	0	1	0	3	0	155	155
20:15	1	58	0	1	59	0	0	3	0	3	2	91	0	1	93	0	0	1	0	1	2	156	158
20:30	3	63	1	0	67	1	0	2	0	3	1	95	0	0	96	0	0	2	0	2	0	168	168
20:45	1	41	0	0	42	1	0	0	0	1	1	109	2	0	112	0	0	1	0	1	0	156	156
Total	8	218	3	1	229	2	0	6	0	8	7	380	4	1	391	2	0	5	0	7	2	635	637
21:00	1	45	2	0	48	1	0	2	0	3	2	83	1	0	86	1	0	2	0	3	0	140	140
21:15	4	43	3	0	50	2	0	0	0	2	1	87	3	0	91	1	0	1	0	2	0	145	145
21:30	2	32	1	0	35	1	0	2	0	3	3	41	0	0	44	0	0	0	0	0	0	82	82
21:45	2	29	0	0	31	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	33	33
Total	9	149	6	0	164	5	0	5	0	10	6	211	4	0	221	2	0	3	0	5	0	400	400
Grand Total	83	7762	103	158	7948	60	7	79	2	146	183	7011	64	145	7258	116	7	198	5	321	310	15673	15983
prch %	1	97.7	1.3			41.1	4.8	54.1			2.5	96.6	0.9			36.1	2.2	61.7					
Total %	0.5	49.5	0.7		50.7	0.4	0	0.5		0.9	1.2	44.7	0.4		46.3	0.7	0	1.3		2	1.9	98.1	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Rainy and Mild
 Counter: DB-400
 Counted by: Josie/Terri

File Name : TMC0735
 Site Code : 07350201
 Start Date : 10/18/200
 Page No : 2

Groups Printed- Bank 1

Start Time	CSAH 51 left into gas station Southbound					90th Lane Westbound					CSAH 51 Northbound					Commercial Entrance Eastbound					Exclu. Total	Inclu. Total	Inf. Total			
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total						
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26			
Approch %	100	0	0			0	0	0			0	0	0			0	0	0			0	100				
Total %	100	0	0		100	0	0	0		0	0	0	0		0	0	0	0		0	0	100				

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 51

Number of Lanes: 2
Approach Speed: 35
Total Approach Volume: 7,258

Southbound: CSAH 51

Number of Lanes: 2
Approach Speed: 35
Total Approach Volume: 7,948

Minor Street Approaches

Eastbound: Commercial Entrance

Number of Lanes: 1

Total Approach Volume: 321

Westbound: 90th Lane

Number of Lanes: 1

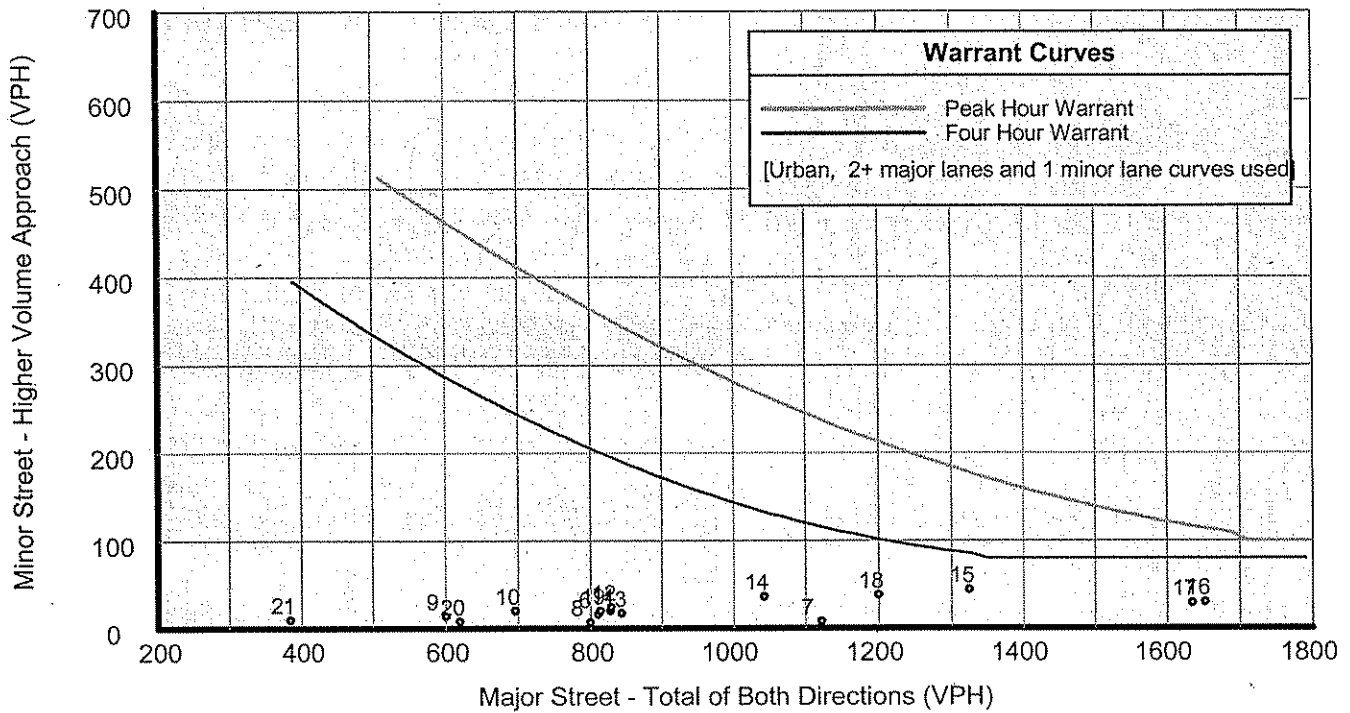
Total Approach Volume: 146

Warrant Summary (Urban values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Required volumes reached for 0 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Not Satisfied
Required volumes reached for 0 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Not Satisfied
Required volumes reached for 0 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Not Satisfied
Number of hours (0) volumes exceed minimum < minimum required (4).	
Warrant 3 - Peak Hour	Not Satisfied
Warrant 3A - Peak Hour Delay	Not Satisfied
Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.	
Warrant 3B - Peak Hour Volumes	Not Satisfied
Volumes do not exceed minimums for any hour.	
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated

ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor		War-1A			War-1B			War-1A&B		
		Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
01:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
02:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
03:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
04:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
05:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
06:00	811	16	WB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
07:00	1,122	8	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
08:00	800	7	EB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
09:00	601	14	EB	600-Yes	150-No	Major	900-No	75-No	---	720-No	120-No	---
10:00	696	20	EB	600-Yes	150-No	Major	900-No	75-No	---	720-No	120-No	---
11:00	828	20	EB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
12:00	829	24	EB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
13:00	844	17	EB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
14:00	1,043	36	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
15:00	1,325	44	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
16:00	1,653	30	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
17:00	1,635	29	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
18:00	1,200	38	EB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
19:00	814	20	EB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
20:00	620	8	WB	600-Yes	150-No	Major	900-No	75-No	---	720-No	120-No	---
21:00	385	10	WB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
22:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
23:00	0	0	EB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Multi-Way Stop Warrant Report

Major Street Approaches

Northbound: CSAH 51

Total Approach Volume: 7,258
Approach Speed: 35

Southbound: CSAH 51

Total Approach Volume: 7,948
Approach Speed: 35

Minor Street Approaches

Eastbound: Commercial Entrance

Total Approach Volume: 321

Westbound: 90th Lane

Total Approach Volume: 146

Warrant Summary

Criteria A - Interim Measure Not Evaluated

If traffic signals are justified, stop signs can be installed as an interim measure.

Criteria B - Crash Experience Not Evaluated

Criteria C - Minimum Volumes and Delays Not Satisfied

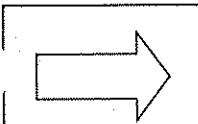
Delay data not evaluated
Required volumes reached for 0 hours, 8 are needed

Criteria D - 80% of Volumes, Delays, and Crashes Not Evaluated

Delay data not evaluated
Number of crashes (-1) is less than the minimum required (4).
Required volumes reached for 0 hours, 8 are needed

Analysis of 8-Hour Volume Warrants:

Time	Major Total	Minor Total	Crit C			Crit D		
			Major	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00 - 01:00	0	0	300-No	200-No	No	240-No	160-No	No
01:00 - 02:00	0	0	300-No	200-No	No	240-No	160-No	No
02:00 - 03:00	0	0	300-No	200-No	No	240-No	160-No	No
03:00 - 04:00	0	0	300-No	200-No	No	240-No	160-No	No
04:00 - 05:00	0	0	300-No	200-No	No	240-No	160-No	No
05:00 - 06:00	0	0	300-No	200-No	No	240-No	160-No	No
06:00 - 07:00	811	18	300-Yes	200-No	Major	240-Yes	160-No	Major
07:00 - 08:00	1,122	16	300-Yes	200-No	Major	240-Yes	160-No	Major
08:00 - 09:00	800	13	300-Yes	200-No	Major	240-Yes	160-No	Major
09:00 - 10:00	601	18	300-Yes	200-No	Major	240-Yes	160-No	Major
10:00 - 11:00	696	26	300-Yes	200-No	Major	240-Yes	160-No	Major
11:00 - 12:00	828	30	300-Yes	200-No	Major	240-Yes	160-No	Major
12:00 - 13:00	829	34	300-Yes	200-No	Major	240-Yes	160-No	Major
13:00 - 14:00	844	24	300-Yes	200-No	Major	240-Yes	160-No	Major
14:00 - 15:00	1,043	49	300-Yes	200-No	Major	240-Yes	160-No	Major
15:00 - 16:00	1,325	50	300-Yes	200-No	Major	240-Yes	160-No	Major
16:00 - 17:00	1,653	37	300-Yes	200-No	Major	240-Yes	160-No	Major
17:00 - 18:00	1,635	45	300-Yes	200-No	Major	240-Yes	160-No	Major
18:00 - 19:00	1,200	50	300-Yes	200-No	Major	240-Yes	160-No	Major
19:00 - 20:00	814	27	300-Yes	200-No	Major	240-Yes	160-No	Major
20:00 - 21:00	620	15	300-Yes	200-No	Major	240-Yes	160-No	Major
21:00 - 22:00	385	15	300-Yes	200-No	Major	240-Yes	160-No	Major
22:00 - 23:00	0	0	300-No	200-No	No	240-No	160-No	No
23:00 - 00:00	0	0	300-No	200-No	No	240-No	160-No	No



COUNT LOCATION:

CSAH 51 (University Ave.)

DATE:

10/18/2007

@ 90th Lane

NORTH

APP.#1= CSAH 51
APP.#2= Commercial Ent.
APP.#3= CSAH 51
APP.#4= 90th Lane

APP.
#2

APP.
#1

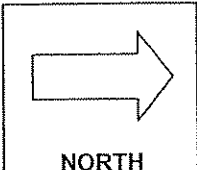
APP.
#3

APP.
#4

- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
 - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
 - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

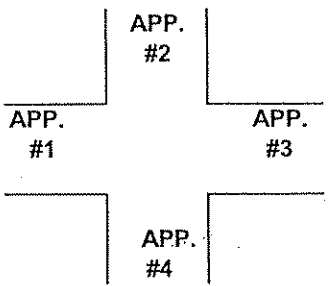
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM								2
6:15-6:30		1			1	6		1
6:30-6:45						1		2
6:45-7:00						5		1
HOURLY TOTAL					1	HOURLY TOTAL		18
7:00-7:15						2		5
7:15-7:30						5		
7:30-7:45						8		1
7:45-8:00						6		3
HOURLY TOTAL						HOURLY TOTAL		30
8:00-8:15						2		1
8:15-8:30						4		3
8:30-8:45			1		1	5		1
8:45-9:00						5		1
HOURLY TOTAL					1	HOURLY TOTAL		22
9:00-9:15		1			1	7		3
9:15-9:30						11		3
9:30-9:45						5		
9:45-10:00						6		2
HOURLY TOTAL					1	HOURLY TOTAL		37
10:00-10:15						3		
10:15-10:30		1			1	7		2
10:30-10:45						7		
10:45-11:00						5		2
HOURLY TOTAL					1	HOURLY TOTAL		26
11:00-11:15						8		
11:15-11:30						7		
11:30-11:45						8		1
11:45-12:00						5		1
HOURLY TOTAL						HOURLY TOTAL		30
12:00-12:15		2			2	4		2
12:15-12:30		1	1		2	5		1
12:30-12:45						7		2
12:45-1:00						2		2
HOURLY TOTAL					4	HOURLY TOTAL		25
1:00-1:15						7		
1:15-1:30						2		
1:30-1:45						1		1
1:45-2:00						2		1
HOURLY TOTAL						HOURLY TOTAL		14
				TOTAL	8		TOTAL	202

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32



COUNT LOCATION: CSAH 51 (University Ave.) DATE: 10/17/2007
@ 90th Lane

- APP.#1= CSAH 51
- APP.#2= Commercial Ent.
- APP.#3= CSAH 51
- APP.#4= 90th Lane



HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.

B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.

C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM						2	1	2
2:15-2:30						4		
2:30-2:45						7		
2:45-3:00						3		2
HOURLY TOTAL						HOURLY TOTAL		21
3:00-3:15						10		2
3:15-3:30						1		2
3:30-3:45						1		2
3:45-4:00						2		2
HOURLY TOTAL						HOURLY TOTAL		22
4:00-4:15								2
4:15-4:30						2		3
4:30-4:45						7		1
4:45-5:00						1		2
HOURLY TOTAL						HOURLY TOTAL		18
5:00-5:15						4		4
5:15-5:30						2		2
5:30-5:45						3		2
5:45-6:00						7		2
HOURLY TOTAL						HOURLY TOTAL		26
6:00-6:15						4		
6:15-6:30						2		2
6:30-6:45								1
6:45-7:00						2		
HOURLY TOTAL						HOURLY TOTAL		11
7:00-7:15						3		
7:15-7:30						1		
7:30-7:45								
7:45-8:00						3		1
HOURLY TOTAL						HOURLY TOTAL		8
8:00-8:15								
8:15-8:30						2		
8:30-8:45								
8:45-9:00								
HOURLY TOTAL								2
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		
					TOTAL		TOTAL	310
					8			

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